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## NOTES ON THE SNOWSHOE RABBIT

BY J. DEWEY SOPER

To the average lover of the open, the life-history of the snowshoe rabbit cannot have escaped a certain measure of familiarity. Usually it is the most common animal of the woods and it would be difficult for even a casual saunterer to overlook it. There has sprung up quite an extensive literature concerning it, and it seems impracticable for the present purpose to attempt a full account of its life-history. So I propose only to amplify certain less frequently considered phases. This idea came to me recently from thumbing through the pages of some old field journals, recalling to mind many incidents pretty well dimmed by the passage of time, but now revived, together with a host of minor episodes not recorded by the pen. It has many times occurred to me as peculiar that some of the most palpable of facts escape the notebook. Perhaps it is because of the very quality of commonness that this is so, and only the unusual facts find their way into the chronicles of the fields.

Most of the notes in this instance were collected in the wilds, in the Indian country, in the late fall and winter, and as previously intimated, I enjoy a very vivid recollection of numerous occurrences which various wayward journeyings have afforded. I also have found discrepancies in the life of the snowshoe rabbit there, from that which ordinarily obtains in the settled East sufficient to compel that striking interest which follows fresh discoveries.

The lives of the various individuals of a species are very different, depending largely upon their situation. The relationship of a hare to its environment in an eastern swamp, encircled by prosperous farms, for instance, cannot be precisely similar to that of another in the relatively uninhabited forests of the North. Its mode of existence basically may be nearly or quite the same, but occasional events change the effect as a whole. These may be trifling or the reverse but the consequences are perceptibly altered from the standpoint of the animal, and a fresh slant of interest afforded its chronicler. For this reason, I suppose, a very great deal may be written concerning any of our animals of wide range, without materially duplicating in detail former experiences.

It would be difficult to visit the northern wilds under ordinary conditions without striking up some acquaintance with the snowshoe rabbit. Its presence is often of the most obtruding character. There are seasons though when its absence becomes quite as singular as is its abundance at other times. The phenomenal balance maintained in the perpetua-

tion of this species is one of the wonders of nature. The marvelous fecundity of the animal as seen in the usual seven-year cycle of abundance, seems a reflection on the beneficence of nature, when such numbers subsequently are so effectually reduced. But without some provision for reduction the final consequences would be rather appalling. It is certain that in time all herbaceous things would disappear. The country would lie in devastation before the progeny of such a prolific race. Of course if this did occur the balance would be struck again when the rabbits all passed away in starvation, but nature proceeds in a more cautious manner without such waste on both sides.

It so happened, that upon my first visit to the West in 1912 the rabbit population was at its height. It was such a revelation after my eastern experiences, so startling, that the vividness of their abundance can never leave me. A certain brushy flat adjoining the White Mud River, southwest of Edmonton, yielded the initial surprise. It was grown to scrub willow, the common trembling aspen, and to some extent with rank under-vegetation. The place was infested. I do not hesitate to say that over that tract of perhaps thirty acres hundreds of hares were found. October had come, without snow. The rabbits had already, wholly or in part, donned their snow-white livery of winter, and were consequently very conspicuous against the mellow brown of the autumn woods. At every turn during my ramble they popped up here and there and scurried for fresh cover. Not only in singles, which was astonishing enough, but often twos and even threes started up in wild alarm. The newness of such an experience does not soon wear away. One receives a peculiar thrill at each additional incident. Scarcely has one received the impression of the previous fleeing object than perhaps another startlingly rockets out from nearly underfoot, stirring up several more in the haste of evacuation. After the first wild impulse of flight which is generally deferred until the last moment, the rabbit bounds leisurely away, sometimes out of sight but as often calling a halt within a few yards. Alarm gives place to a very singular curiosity. Individuals with really admirable nonchalance describe a dozen leisurely jumps, halt, assume an attitude of keen inquiry, a rigid immobility popularly known as "freezing," and wait. That pause is oftentimes fatal. They appear bold or indifferent because of their very numbers. These snowy figures like statues in the distance form one of the features of a woodland ramble.

Over the country to which these remarks broadly refer, namely, the northern and western parts of Alberta, the rabbits often become a

plague. The toiling trapper, depending on the effectiveness of each of his traps, they drive to a form of desperation.

Night after night along the whole long line the cubby or bait pens are torn down or in some way molested. The bait frequently disappears, the traps are sprung, and in a good many instances (sometimes half of them) the rabbit sacrifices his life to his curiosity. The traps thus set



THE SNOWSHOE RABBIT

These snowy figures like statues in the distance, form one of the features of a woodland ramble

for costly fur-bearers are consequently rendered useless—filled with “trash” as it is regarded. The best that can be done is to remove the rabbit carcass from the “set,” wedge it overhead in a forked tree, make all additional provisions against the blundering in of others, and resume chances. I can vouch for it as being rather disheartening work for I have taken as high as a dozen hares from a line of twenty lynx traps in a single morning. There is a method of adjusting a fine bent twig under the pan of a large trap to prevent the smaller species from springing the trap, but the idea is not practical except when employed on the

largest traps. The reason for all this tampering with meat baits by rabbits, leads to a subject which, I believe, is not widely known and to which I will refer later.

Eventually, evidence of the inevitable decline arrives. Empire among the rabbits as elsewhere has its rise and fall, and then is swept away. A strange peril stalks through the woods; the year of death arrives. An odd rabbit drops off here and there, then twos and threes, then whole companies die, until the appalling destruction reduces the woods to desolation. There is something almost spectacular in its compass, in its silent and sinister progress. I have walked the woods where formerly hundreds of playful rabbits dwelt, where signs were evident on every hand, yet the woods were empty. A peculiar sense of loneliness comes over one under such circumstances. One year (1917) in the district of Sudbury, northern Ontario, the signs of rabbits were everywhere but not a single rabbit could I start. It seemed incredible. Local inquiries disclosed that a little over a year before the *Lepus* population was beyond count. Now as if by magic they were gone. Needless to say, however, a few individuals survive the epidemic. These now, because of their paucity are seldom encountered. The following year at Ridout, same locality, I observed a noticeable increase. Not that they were plentiful or even common, by any means, but there were frequent trails in the early snow and I started occasional animals. In these few existed the prophecy of another dominion.

There is such a sense of sociability in a wilderness well stocked with these animals, that a subsequent lack of them is at once appreciated. One is sensible of a loss. In the same way the moose bird with his quaint talkative ways becomes one of the presumptive elements of a camp. One night while we were camped near the Athabaska, with a mere square of canvas sufficient only to deflect the wind, it snowed, a calm fluffy fall of several inches. It fell over and about our sleeping forms and in the morning imprinted in it were the tracks of rabbits all around us. They had nosed up to every conspicuous object about camp—the water pail, ax, overturned boots, etc., had even kicked the ashes of the extinct camp fire over the snow and eventually to their satisfaction I presume had solved the enigma of this sudden encampment in their midst. Several trails completely circled our camp. At the time we were entirely unconscious of these frolics. On other occasions morning betrayed their fearless errands about camp, during which they had actually browsed on a quantity of spruce boughs placed to resist the wind at our heads. Again we knew nothing of it until day-

light. Small wonder it is, that the winter wilderness seems less empty and forlorn with such antics of the wild ones about one's habitation.

After the completion of our new log cabin on the Hay River, Rocky Mountain region, in 1913, the rabbit population soon discovered us. The aromatic wealth of spruce boughs that littered the little clearing spread its fame abroad. Perhaps never before in this region had hospitality spread such a lavish *table d'hôte*. As dusk descended rabbits came hopping into the enclosure from every direction. There was no evidence of their presence beyond the silent flitting forms passing lightly from place to place. With only the soft sombre wail of the pines and spruces how phantom-like they seemed in the gloaming: now prominent, now melting into the shadows, now motionless, now shifting here and there, spectre-like in the sober stillness. One sparkling moonlight night they visited the clearing in unusual numbers. It was such a night as carried the "yip" of the foxes over long distances with startling distinctness. In the deeper shadows of the spruces an owl mournfully hooted at long intervals. A strange magic charged the brilliant frosty night. One by one they capered into the zone of moonlight. All seemed imbued with a spirit of festive joviality, doubling about with playful pranks and short sallies of wild abandon but ever and anon returning to the sumptuous feast.

Observed from the cabin window, this pantomime went constantly on; the revelers seemed never to tire. Some fed, some frolicked as in games of tag, but a rigid alertness never for a moment ceased. Always one or more of the company sat erect on its haunches, alert, ears forward, nose aquiver, sifting the implications of the night. One ominous sound or sign was enough to scatter this merry assemblage to dark and distant shadows. When one watcher went down another was already acting as sentinel. Still new arrivals came hastening along the ramifying trails. It seemed probable that the entire rabbit population within a wide radius were conscious of this regal occasion. At one time we counted twenty-five in easy view; double that number were possibly present, some hidden behind the piles of boughs or in the shadowy outskirts of the moonlight. Fresh arrivals there were always; and some departures. To calculate accurately their numbers was impossible. When we turned in for the night they still played, and perchance the pallid dawn and the waning moon alone ushered them back to the shelter of the thickets. Truly it was a rare scene and one which tonight, after seven years, lingers in my memory as though it passed but an hour ago.

*Wa-poos*, as the Crees call him, plays a very important part in the Indian diet, besides furnishing the skins from which their famous rabbit-skin winter robes are made. In the many instances in which I have had occasion to visit Indian wigwams, winter cabins, or in coming accidentally upon their shifting camps, signs of the defunct hare were almost always present. Such bones and feet and fur as had escaped the hungry dogs bestrewed the near landscape. When we arrived at the Fish Lakes in early October, 1913, a number of Indian youths were stalking about in the thickets bordering the lake and outlet hunting snowshoe hares with the primitive bow and arrow. Nor did they lack the skill to get them. The Indian seldom wastes ammunition in getting the hare, the main dependence being placed in the snare. Invariably, in fall and winter at least, as one approaches an encampment large or small, the rabbit snare is conspicuous. A small spruce lies prone, a few branches lopped out underneath forms an opening, and in this reposes the treacherous snare attached to a balance pole secured to a neighboring tree. *Wa-poos*, sniffing the fresh-fallen spruce as invariably he does, nibbles and hops along. Then coming to the inviting lane in the tangle, he dives through, releases the snare and is jerked aloft, a grotesque kicking figure soon to be silenced forever. The snare is a very simple arrangement and very effective. Perhaps a score may be scattered about the camp to a distance of fifty or more yards, further afield if it is a permanent camp. I carefully took note of the structural peculiarities of this snare as employed by the Crees and early pressed it into service on my own account as a means of providing bait for a long line of traps. During the period of trial in which several snares were doing duty about my cabin, an Indian spied one while passing the clearing. I chanced to be near, and the pleasure he evidenced in this work of emulation was an entertainment seldom afforded among this people. His stoical countenance became transfigured with half-a-smile as he turned with some such expression as *Me-wa-ne-pa-hou* (good to kill).

Few animals are considered more strictly vegetarian than the rabbit, yet occasionally it develops tastes to the contrary. This at first was quite a surprise to me. It has no capacity however for gratifying such carnivorous inclinations by any effort of its own, except that of killing young leverets which it is supposed at times to do. On the contrary, any meat which it has access to under ordinary wilderness conditions is supplied by some outside agency. The habit of robbing trap cubbies of bait leads to various consequences. I have known them to demolish a cubby of wooden chunks completely in the effort to reach a frozen hindquarter of one of their own species. The entrances to these cub-

bies intended for ermine and designed to exclude the hare are so small that they really adopted the only method serving to attain their object. Especially when yielding to cannibalism do they appear to go far beyond proper bounds. The flesh of one of their own kind is fully as acceptable as any other. Frozen meat they seem to prefer. When one of their number is killed say by a rifle ball, and left lying, the living of the locality turn to and make a sordid repast. They start from the wound by licking away the blood, gradually nibbling the flesh and tearing the fur back. I cannot recall ever having seen a perfect body molested, such as one taken from a snare. It appears that a wound or tear exposing the flesh is necessary before a start is made. So accurately does the following published letter to Ernest Ingersoll reflect my own experiences in this respect that I can do no better than quote it for additional detail.

Dear Editor: I read with interest "U. S.'s" letter to you in the issue February 13 concerning Animal Cannibalism as noticed by him among wild rabbits.

I can endorse every word he says about dead rabbits being regularly eaten by their own kind in this part of Canada. It is a common occurrence on bright evenings to see rabbits about my shack, or near the stables gnawing at any dead rabbits or part of one left in the snow; and as a rule, very little is left of the carcass in the morning except the skin and bones. They will, however, rarely touch a whole rabbit left with the skin on but one that is torn, cut up, or partly skinned they make short work of. They will also eat any other animal with the skin off, as anyone who has done any trapping for weasels, etc., in the far north well knows. Baits are regularly pulled down and eaten up to the bone; and the trouble here is stopping the little cannibals from springing your traps. The rabbits in this district are healthy enough, and have no lack of food in poplar bark, hay, etc., but they never fail to gnaw the flesh off the bones of a dead comrade, and have done so, to my personal knowledge ever since I came into this country six years ago.

As you seem to have a doubt on the matter I may add that my experience is also the experience of my friends and neighbors, and no question of mistaking tracks in the snow can arise, as anyone can watch the rabbits any evening enjoying a supper of flesh by just throwing down near the haystack the cut-up carcass of another rabbit, muskrat or any other small animal.

Clyde, Alberta.

F. B.

In passing I wish to make reference to the peculiarity of this species in taking to the water. I think this habit is little recognized as of actual occurrence, much less as one practiced more or less regularly, and free from the nature of accident. Although the evidence is indubitable on this score I instinctively feel that this essentially woodsy and fluffy creature resorts to such measures only on rare occasions. However this may be, it is certain it has no hesitation at times in voluntarily swimming rivers of modest width. Just how frequently such aquatic

excursions are made, remains of course unknown. The trouble is, that in summer there is lack of sign and in winter the necessity no longer exists. Ocular evidence can occur only as a rarity. Occasionally one comes upon "sign" such as the following.

While traveling one winter day down the Hay River in western Alberta I came to a narrow part of the course where the constriction of the banks forced the water to greater speed. Here there was an open riffle of several hundred yards in length by about four or five in width. Otherwise, ice covered the entire river. This rift of dark swift water in mid-channel raced along at about eight or ten miles an hour. Presently in the fresh fallen snow I noticed the tracks of a snowshoe rabbit, leading down from the timber on my left, across the shore ice, and terminating on the brink. Walking down stream I solved the puzzle by seeing a sodden splash in the snow on the further side where the animal had been swept down and had clambered out dripping from the plunge. The tracks were then resumed across the white snow field, disappearing in the woods beyond. This was the first time I ever noticed this occurrence, was indeed the first intimation that a rabbit ever even wet its feet unless forced to do so. The nature of the trail in this instance proved it to be an action of leisurely choice. No fox or ermine trailed along in the wake of a wild bounding hare ready to submit to water rather than to jaws, for back trailing I found nothing calculated to urge the rabbit from its own placid ramble. To our ordinary everyday conception of its nature the whole affair seems a paradox. I know I was utterly taken back at the time, but was forced to accept the evidence of my own eyes. Since then I have heard or read of similar observations by others. I have, by the way, in years since, known red squirrels to do the same thing. On one other occasion a couple of years ago in New Ontario, I had further evidence of the hare's accomplishment as a swimmer. The conditions were similar to the incident already related.

When such things at times crop up and tax our credulity on a basis of unimpeachable evidence, how eloquently it argues for untraveled byways in nature which we have yet to explore. There is something vital in the reflection that there are puzzles to solve, occultisms to stumble upon. When such phases in the life-history of our native mammals, thought previously to be well understood, suddenly appear from the unknown or what we consider as the improbable, what absorbing facts, perhaps, remain still to be learned from the lives of the hunted.

*Guelph, Ontario.*